

Claims:

1. A pressure sensor comprising:

a sensor unit in which a piezoelectric layer containing a piezoelectric ceramic material is sandwiched by a plurality of electrodes;

a covering layer which covers the sensor unit; and

heat insulating means made from an expandable synthetic resin which covers the circumference of the covering layer.

2. A pressure sensor as set forth in Claim 1, wherein the sensor unit is a cable-like sensor comprising a primary electrode which makes up a core unit, a piezoelectric layer which covers the primary electrode and a secondary electrode which covers the outside of the piezoelectric layer.

3. A pressure sensor as set forth in Claim 1, wherein the sensor unit is a sheet-like sensor which is formed such that a piezoelectric layer is sandwiched by a primary electrode and a secondary electrode.

4. A pressure sensor as set forth in any of Claims 1 to 3, wherein the heat insulating means is an elastic material having a hollow portion formed therein.

5. A pressure sensor as set forth in any of Claims 1 to 4, wherein the heat insulating means is made to double as the covering layer.

6. A pressure sensor as set forth in any of Claims 1 to 5, wherein the heat insulating means comprises a mounting portion for mounting the pressure sensor on an equipment base material.

7. A pressure sensor fabricating method for fabricating

the pressure sensor set forth in any of Claims 1 to 6, comprising a step of molding a heat insulating means on the periphery of the sensor unit through extrusion molding.

5           8.     An object detecting system comprising the pressure sensor set forth in any of Claims 1 to 6 and determination means for determining on the contact of a foreign matter with the pressure sensor based on an output signal of the pressure sensor, whereby the contact of an object with the equipment is detected.

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          9.     An object detecting system comprising:

          the pressure sensor set forth in any of Claims 1 to 6 that is mounted either on an edge of an opening of equipment or on an edge of a closing member which opens and closes the opening; and

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          determination means for determining on the contact of a foreign matter with the pressure sensor based on an output signal of the pressure sensor, whereby the trapping of a foreign matter between the opening and the closing member is detected.

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